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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------|-------------|----------------------|---------------------|------------------|
| 09/749,586 | 12/28/2000 | Jung-kwon Heo | 1293.1162/MDS | 4838 |
| 49455 | 7590 | 08/11/2005 | | EXAMINER |
| STEIN, MCEWEN & BUI, LLP | | | | VENT, JAMIE J |
| 1400 EYE STREET, NW | | | | |
| SUITE 300 | | | ART UNIT | PAPER NUMBER |
| WASHINGTON, DC 20005 | | | 2616 | |

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/749,586 | HEO ET AL. | |
| | Examiner | Art Unit | |
| | Jamie Vent | 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 May 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) _____ is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-40 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 28 December 2000 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1.) Certified copies of the priority documents have been received.
 2.) Certified copies of the priority documents have been received in Application No. _____.
 3.) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. _____
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 5) Notice of Informal Patent Application (PTO-152)
 Paper No(s)/Mail Date _____ 6) Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed May 24, 2005 have been fully considered but they are not persuasive.

On page 13, applicant argues that Lee et al fails to disclose, teach or fairly suggest the following limitation: "first data and second data which are different from each other in type and formed of a respective plurality of data units" as recited in Claim 1. Lee et al discloses in Column 7 Lines 15-50 describes that each first data and second data are different in types as seen specifically in Column 7 Lines 40-47 wherein the first data section is MIDI data of a certain musical piece. The additional second data pieces could include text information or font data to construct a background that corresponds to the different first data section (MIDI data) and thereby meeting the limitation.

Furthermore, on page 13 applicant argues that Lee et al fails to disclose, teach, or fairly suggest the following limitation: "a first unit data descriptor table and a second unit table descriptor table in which information on the first data units and the second data units is respectively recorded as data unit descriptors" as recited in Claim 1. It is noted in Column 2 Lines 34-44 describes the table areas and the indexing of the data areas which include minute, frames, and seconds. The descriptor areas are further seen in Figure 5 which shows the first index table recorded in the first table area and Figure 6 which shows the second index table recorded in the second table area. Furthermore, the American Heritage College Dictionary defines "descriptors" as "used to identify an item in a data storage or retrieval system". Although, Lee et al fails to use the term "descriptors" it is noted that the definition is encompassed in the specification as seen in Column 2 Lines 33-44 wherein the table data is used to index the various stored data and thereby meeting the limitation.

Additionally, on Page 14 applicant argues that Lee et al fails to disclose, teach, or fairly suggest the following limitation: "recording apparatus for recording data of different types on a recording medium" as recited in Claim 18. Column 8 Lines 12+ describes the recording of various data types onto the recording medium from the various types of data in the index tables to the video and audio information that is recorded onto the recording medium. Furthermore, applicant argues that Lee et al fails to disclose, teach, or fairly suggest the following limitation: "a first signal processor which formats a first data stream input into independent units, codes the formatted first data units and provides the coded first data units to the recording medium" as recited in Claims 18 and 31. Lee et al illustrates in Figure 10 the digital signal processor (DSP) 150 which decodes the signal into independent units as further described in Column 8 Lines 15-25 wherein further encoding of the data units are processed for recording the units onto the recording medium and thereby meeting the limitation. Although, of all applicants points are understood the examiner can not agree and therefore the rejection is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-40 are rejected under 35 U.S.C. 102(b) as being unpatentable by Lee et al (US 5,570,340).

[claim 1]

In regard to Claim 1, Lee et al discloses a recording medium on which is recorded a data structure comprising:

- first data and second data which are different from each other in type and formed of a respective plurality of data units (Figure 3 shows the first data 18 and second data 20 as further described Column 6 Lines 42-50);
- a first data unit descriptor table and a second data unit descriptor table in which information on the first data units and the second data units is respectively recorded as data unit descriptors (Figure 3 shows the first table descriptor 14 and second table descriptor 18 as further described in Column 6 Lines 44-52); and
- a first program descriptor table and a second program descriptor table in which information on one or more data units forming respective programs is stored in a program descriptor of a corresponding program in the form of information on respective data unit descriptors, wherein the information on the first data units, which are to be reproduced after the first data units are linked to the second data units, is included in the program descriptor of the second program descriptor table (Column 2 Lines 32-44 describes the linking of data units that are included in the second program descriptor table.).

[claims 2, 7, 13, 19, 24, 32]

In regard to Claims 2, 7, 13, 19, 24, and 32, Lee et al discloses a recording medium wherein the first data is video data of still pictures and the second data is audio data (Column 1 Lines 15-25 and Column 7 Lines 15-20 discloses that the first data is video data in the form of still pictures and the second data is audio data).

[claims 3, 8, 20, 25, & 33]

In regard to Claims 3,8,20,25, and 33, Lee et al discloses a recording medium wherein predetermined information in the first data unit descriptor is copied, as the information on the first data unit, to the program descriptor of the second program descriptor table (Column 7 Lines 35-50 describes the process of copying the first data unit descriptor regarding information about the first data unit into the second program descriptor table).

[claims 4, 9, 15, 21, 26, & 34]

In regard to Claims 4, 9, 15, 21, 26 and 34, Lee et al discloses a recording medium wherein the predetermined information on a recording time of the first data unit (Figure 2 shows the time of the first data unit which is further described in Column 6 Lines 29-40).

[claims 5, 27, & 35]

In regard to Claims 5, 27, and 35, Lee et al discloses a recording medium, wherein the predetermined information on the first data unit in the second program descriptor table is not the same as the corresponding information on the first data unit in the first data unit descriptor, the information on the first data unit in the second program descriptor table is updated so that the information is the same as the information on the first data unit in the first data unit descriptor (Column 6 Lines 7-50 describe the process wherein the second program descriptor table is updated so that information is the same as the first unit descriptor).

[claims 6, 38, & 39]

In regard to Claims 6, 38, and 39, Lee et al discloses a recording medium comprising:

- recording first data and second data, which are different from each other in type and each formed of a respective plurality of data units, on a recording medium (Figure 3 shows the first data 18 and second data 20 as further described Column 6 Lines 42-50 wherein the data is recorded onto the recording medium); and

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- recording a first data unit descriptor table and a second data unit descriptor table on the recording medium, wherein information on the first data units and the second data units is stored as data unit descriptors in the first and second data unit descriptor tables, respectively (Figure 3 shows the first table descriptor 14 and second table descriptor 18 as further described in Column 6 Lines 44-52);
- recording a first program descriptor table and a second program descriptor table on the recording medium, wherein information on one or more data units forming respective programs are stored as a program descriptor of a corresponding program in the form of information on respective data unit descriptors, and wherein the information on at least one of the plurality of the first data units, which is to be reproduced after the at least one of the plurality of first data units is linked to at least one of the plurality of the second data units, is included in the program descriptor of the second program descriptor table (Column 2 Lines 32-44 describes the linking of data units that are included in the second program descriptor table.).

[claims 10, 16, 22 28, & 36]

In regard to Claims 10, 16, 22, 28, and 36, Lee et al discloses a recording method comprising:

- determining whether information on the first data unit in the second program descriptor table is the same as the information on the first data unit in the first data unit descriptor (Column 7 Lines 5-35 describes the determination of whether the first data unit on the second table is the same as the first data unit on the first table); and
- when the two items of information are not the same, updating the information on the first data unit in the second program descriptor table so as to become the

same as the information on the first data unit in the first data unit descriptor, and recording the updated information (Column 7 Lines 35-50 describe the updating the information of tables so they are the same).

[claims 11 & 30]

In regard to Claims 11 and 30, Lee et al discloses a reproducing method of reproducing data from a recording medium on which first data and second data which are different from each other in type and formed of a plurality of data units are recorded; a first data unit descriptor table and a second data unit descriptor table, in which information on the first data units and the second data units are respectively stored as data unit descriptors, are recorded (Figure 3 element 14 and 16 show the first and second descriptor tables); and a first program descriptor table and a second program descriptor table in which information on one or more data units forming respective programs are stored in the program descriptor of the corresponding program in the form of information on respective data unit descriptors, wherein in the program descriptor of the second program table information for linking the first data and the second data are recorded (Figure 9 shows the linking of various program and table information), the reproducing method comprising:

- reading the second program descriptor having the information on the program to be reproduced, and then reading the information on the first data unit descriptor and the second data unit descriptor related to the corresponding program, from the read second program descriptor (Column 2 Lines 50-57 describes the reading of the information related to the corresponding program);
- reading the corresponding data unit descriptors from the first and second data descriptor tables corresponding to the read first and second data unit descriptors (Column 2 Lines 58-64 describes the reading of the corresponding tables); and

- synchronizing and reproducing the first data unit and the second data unit indicated by the read first and second data unit descriptors.(Column 2 Lines 58-67 describes the synchronizing of data in the unit descriptor tables).

[claim 12]

In regard to Claim 12, Lee et al discloses a reproducing method wherein the synchronizing and reproducing further comprises:

- temporarily storing the first data units indicated by the first data unit descriptors corresponding to the program to be reproduced to a memory (Column 2 Line 57 describes the storing of the first data into the first memory); and
- reproducing the second data units indicated by the second data unit descriptors corresponding to the program to be reproduced, and at the same time synchronizing, to the second data, and reproducing the first data units after reading the first data units stored in the memory (Column 2 Lines 50-67 describes the reproducing of data corresponding to the reproduced data and storing the data in the respected memory.)

[claim 14]

In regard to Claim 14, Lee et al discloses a reproducing method, wherein the information on the first data unit, which is to be reproduced after the first data unit is linked to the second data unit, is stored, as linkage information, in the program descriptor of the second program descriptor table, and predetermined information in the first data unit descriptor is copied, as the information on the first data unit, to the program descriptor of the second program descriptor table (Column 3 Lines 18-30 describes the linking and copying of information of the first data unit to the second program descriptor table).

[claim 17]

In regard to Claim 17, Lee et al discloses a reproducing method further comprising:

- determining whether the information on the first data unit in the second program descriptor table is the same as the information, which corresponds to the information on the first data unit, on the first data unit in the first data unit descriptor (Column 3 Lines 10-17 describes the determination of whether the information on the first and second data unit is the same as that in the first data unit descriptor table); and
- when the two items of information are not the same, reproducing the second data unit while withholding reproduction of the first data unit (Column 3 Lines 15-30 describes the withholding of reproduction of the first data unit when two items of information are not the same).

[claim 18]

In regard to Claim 18, Lee et al discloses a recording apparatus for recording data of different types on a recording medium, the recording apparatus comprising:

- a first signal processor which formats a first data stream input into independent units (Figure 10 shows the digital signal processor (DSP) 150 which decodes the signal into units as further described in Column 8 Lines 15-20),
- codes the formatted first data units, and provides the encoded first data units to the recording medium (Column 8 Lines 15-25 describes the encoding of the units to the recording medium);
- a second signal processor which formats a second data stream input into independent units, codes the formatted second data units, and provides the coded second data units to the recording medium (Column 8 Lines 30-58)

describes the second signal processor which decodes the signal into independent units and provides the information to the recording unit); and

- a system controller which generates a first data unit descriptor table and a second data unit descriptor table, in which information on the first data units and the second data units are respectively stored as data unit descriptors, and a first program descriptor table and a second program descriptor table, in which information on one or more data units forming respective programs are stored in a program descriptor of a corresponding program in the form of information on respective data unit descriptors, wherein information on the first data unit, which is to be reproduced after being linked to the second data unit, is included in the program descriptor of the second program descriptor table (Figure 10 MCPU 200 controls information that is stored in the descriptor tables (memory 300) As further described in Column 8 Lines 59-67).

[claims 23 & 31]

In regard to Claims 23 and 31, Lee et al discloses an apparatus for reproducing data from a recording medium on which first data and second data, which are different from each other in type and formed of a plurality of data units, are recorded, as previously disclosed in Claim 11, with the additional limitation of the reproducing apparatus comprising:

- a system controller which reads the second program descriptor having the information on the program to be reproduced, reads the information on the first data unit descriptor and the second data unit descriptor related to the corresponding program from the read second program descriptor, and reads corresponding data unit descriptors from the first data descriptor table and the second data descriptor table corresponding respectively to read information on

the first data unit descriptor and the second data unit descriptor (Figure 10
MCPU 200 is the system controller which reads the various descriptor table
information as disclosed in Column 8 Lines 13-67);

- a memory (Figure 10 memory 300);
- a first signal processor and second signal processor (Figure 10 DSP 150 and
MCPU acts as signal processor which decodes information regarding the data
contained in the descriptor tables).

[claims 29 & 37]

In regard to Claims 29 and 37, Lee et al discloses reproducing apparatus wherein the memory
is embedded in the first signal processor (Figure 10 shows the memory 300 which is embedded
in the signal processor MCPU 200).

[claim 40]

In regard to Claim 40, Lee et al discloses a data structure for synchronizing reproduction of a
data unit of a first type with reproduction of a data unit of a second type from a recording
medium, the data structure comprising: a first and second table which relates a first and second
data unit descriptor with the first and second data unit (Figure 3 shows the first table descriptor
14 and second table descriptor 18 as further described in Column 6 Lines 44-52).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time
policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamie Vent whose telephone number is 571-272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached on 571-272-7950. Effective July 15, 2005, the Central Fax Number will change to 571-273-8300. Faxes sent to the old number (703-872-9306) will be routed to the new number until September 15, 2005.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jamie Vent

Jamie Vent
08/08/05

James J. Groody
James J. Groody
Supervisory Patent Examiner
Art Unit 262 2616

James J. Groody
James J. Groody
Supervisory Patent Examiner
Art Unit 262